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(54) Abstract Title
A body-mounted camera stabiliser

(57) A camera stabiliser support comprises a body frame 1 strapped to a camera operator's body, a support frame 2, means 3 for producing constant tension in a cord 5, and a camera platform 10 suspended from one end of the cord 5. The cord 5 is able to extend and retract from tension means 3, preferably a spring motor, so that any jerky movements of the frame or operator are not transmitted to the camera platform 10. The platform 10 is able to pivot vertically and horizontally as well as rotate about a vertical axis. The position of the centre of gravity of the camera and platform 10 may be varied by adjusting weights 14 to facilitate manipulation of the camera.

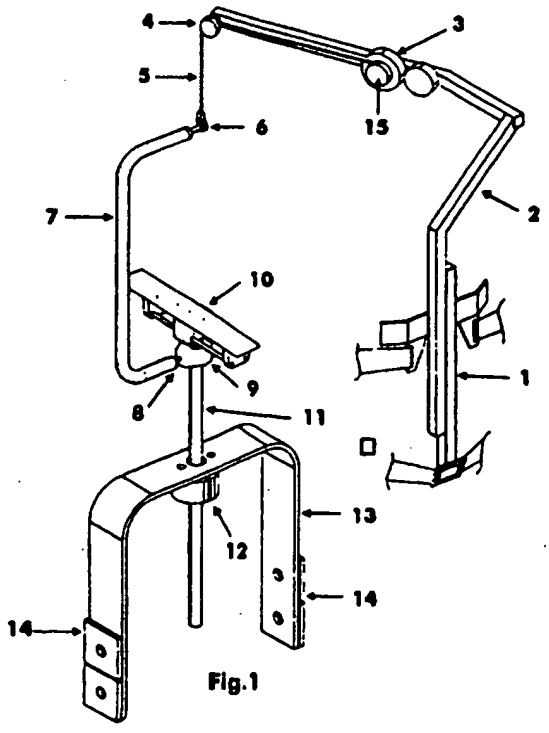

Fig.1

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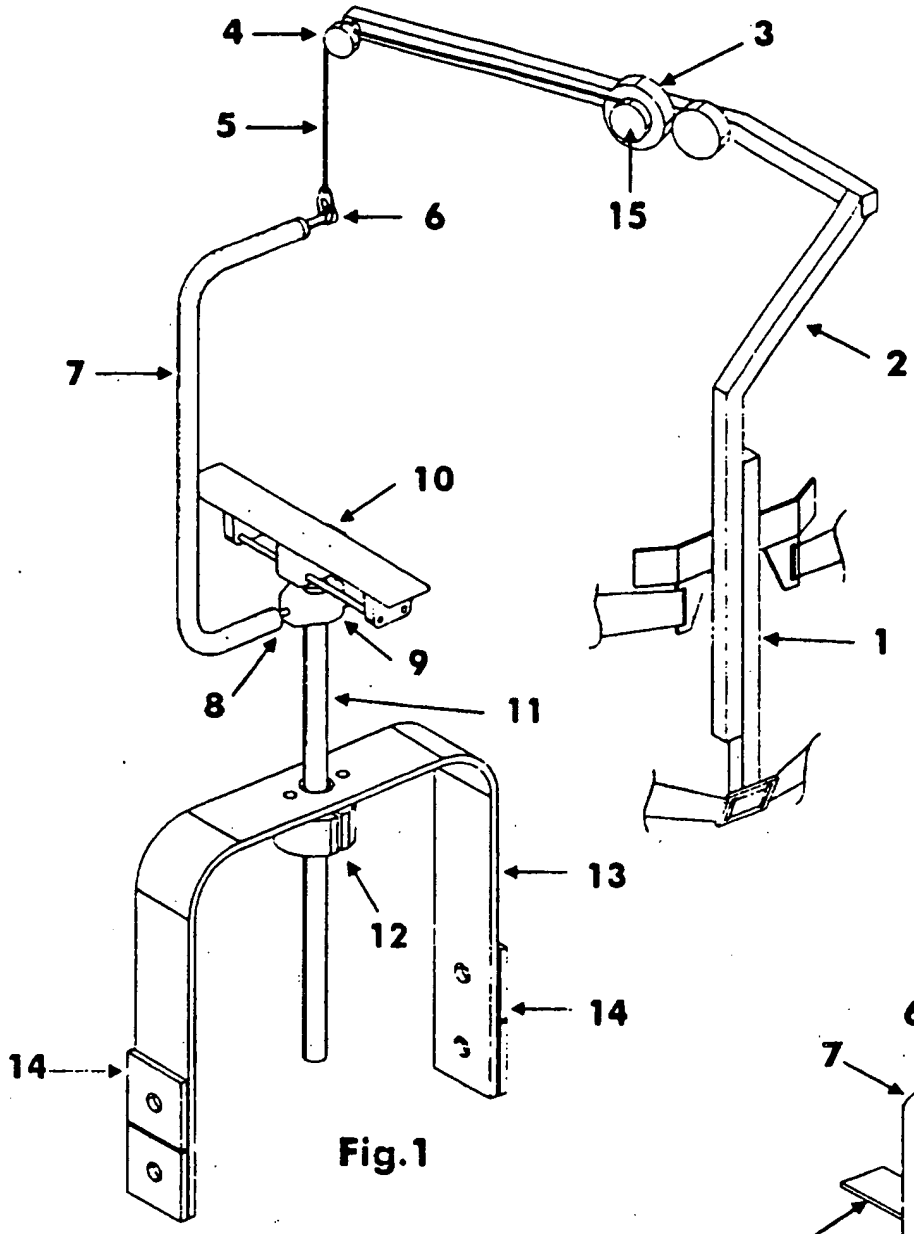

Fig.1

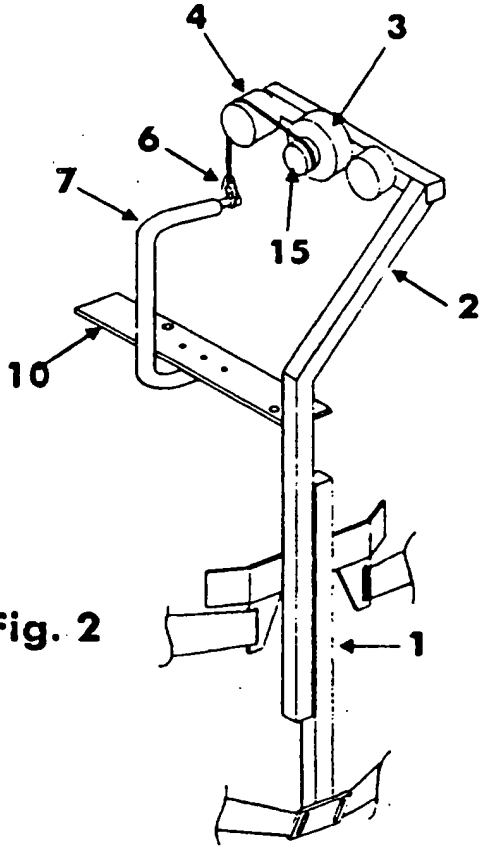

Fig. 2

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CAMERA STABILISER SUPPORT

This invention relates to camera stabilising supports.

When a cameraman walks or moves while operating a movie or video camera it is important that the camera moves smoothly.
To this end the camera must be conveniently supported and isolated from the jerky movements of the operator and be easily controlled by light actions of the operator.

Existing mechanisms that achieve this result are complex and expensive to produce and difficult to set up and use, or are unsuitable for heavier, professional equipment.

According to the present invention there is provided a camera support comprising a frame of one or more parts strapped to the operators body. Attached to this frame is provided a means of producing a constant tension in an extendible cord that supports directly or indirectly a camera platform so that the camera and platform are suspended in front of, or over the shoulder of the operator by the cord. The tension in the cord is adjustable to equal the combined weight of the equipment hanging from it with the cord being free to extend or retract while maintaining this constant tension.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which;-

Fig 1. shows in perspective the complete assembly with the suspension point in front of the operator.

Fig. 2 shows in perspective the complete assembly with the suspension point over the shoulder of the operator.

With reference to the drawings a 'body' frame (1) is strapped to the operators back. A 'support' frame (2) is attached to the 'body' frame (1) and runs above the shoulder of the operator to a point in front of the operator. Attached to this 'support' frame (2) is a constant torque spring motor (3) such as a Tensator (RTM) spring and a pulley (4). A cord (5) is wound round a bobbin (15) powered by the spring motor (3), runs over the pulley (4), and supports the camera platform. This camera platform consists of the following. A 'U' shaped frame (7). A horizontal swivel (8) positioned between the frame (7) and a clamp (9). The clamp (9) is clamped around a centre tube (11) on top of which is connected a camera attachment plate (10). Clamped to the centre tube (11) below the clamp (9) is a second clamp (12) attached to a 'U' shaped 'weight support' frame (13) and weights (14).

In use the tension produced in the cord by the spring motor is adjusted to equal the weight of the camera and assembly suspended from it by varying the diameter of the bobbin (15). In this way vertical movements of the pulley are not directly transmitted to the camera platform and also the camera is free to move up and down effortlessly under the control of the operator. The cord being free to twist and assume different small angle to the vertical allows the camera to pan horizontally and also isolates the camera platform from small horizontal movements of the pulley. The horizontal pivot (8) allows

the camera to pan vertically. An adjuster (6) mounted between the cord (5) and frame (7) can be adjusted so that the centre of gravity of the camera and platform is directly below the point of suspension. The camera attachment plate (10) is adjustable so that the centre of gravity of the camera can be positioned directly above the centre tube (11). The 'weight frame' (13) can be clamped anywhere along the centre tube (11) and the weights (14) varied so as to position the centre of gravity of the camera and platform in a suitable position to allow easy manipulation of the camera.

In this way the camera is conveniently supported and isolated from jerky movements of the operator and easily manipulated.

CLAIMS:

1 A camera support comprising a frame of one or more parts strapped to the operators body. Attached to this frame is a means of producing a constant tension in an extendible cord that supports directly or indirectly a camera platform so that the camera and platform are suspended in front of the operator by the cord with their combined weight counterbalanced by the tension in the cord, and with the cord being free to extend or retract while maintaining this constant tension

2 A camera support as claimed in Claim 1, wherein the camera platform has a single pivot to allow the camera to pan vertically.

3 A camera support as claimed in Claim 1, wherein the camera platform has 2 horizontal pivots positioned at right angles to allow the camera to tilt freely in all directions.

4 A camera support as claimed in Claim 1, 2 and 3, wherein the camera platform has a swivel to allow the centre tube and attached components to rotate on a vertical axis.

5 A camera support as claimed in Claim 1,2,3 and 4, wherein the camera is suspended above the operators shoulder.